ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY CONSTRUCTION PERMIT

Permit No. 267CP01 Date: Final – April 28, 2003

ConocoPhillips Alaska, Inc.
Kuparuk Central Production Facility #1
Permit Revisions Pertaining to Emission Limits

The Department of Environmental Conservation, under the authority of AS 46.03, AS 46.14, AS 46.40, 6 AAC 50, 18 AAC 15, and 18 AAC 50.315, issues an Air Quality Construction Permit to:

Owner(s):

ConocoPhillips Alaska, Inc.
700 G Street
P.O. Box 100360
Anchorage, AK 99510-0360

Exxon Company, USA
800 Bell Street, Room 2917
P.O. Box 2180
Houston, TX 77252-2180

BP Exploration (Alaska) Inc
900 E. Benson Blvd.
P.O. Box 196612
Anchorage, AK 99519-6612

Union Oil Company of California
909 West 9th Ave
P.O. Box 190247
Anchorage, AK 99519-0247

Chevron Texaco
P.O. Box 36366
Houston, TX 77236

Mobil Oil Corporation
12450 Greenspoint Drive
Houston, TX 77060-1991

The Department authorizes the following revisions to:

1. Operating Permit No. 9373-AA004 Amendment #1 for
   - the rated capacity for some of the equipment listed in Exhibit A;
   - the removal of some equipment listed in Exhibit A that are no longer in operation;
   - the inclusion of the diesel-fired equipment and storage tanks missing in Exhibit A and provided in 8/30/02 permit application;
   - the short-term and annual emission limits for equipment listed in Exhibit B; and
   - minor deletions from the requirements of Exhibit C.

2. PSD Construction Permit No. 9773-AC016 Revision 1 for
   - the rated capacities of the equipment listed in Section IV.A.

In accordance with the terms and conditions of this permit, and as described in the original permit application. This permit also authorizes the Permittee to operate the proposed equipment as provided by AS 46.14.120.

_____ _____

John F. Kuterbach, Manager Date
Air Permits Program

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PERMIT TERMS AND CONDITIONS

A. 18 AAC 50.340(i): Permit Continuity

1. This permit rescinds and replaces Air Quality Control Permit to Operate No. 9373-AA004 and Air Quality Control Construction Permit No. 9773-AC016 as amended through January 3, 1997 and June 27, 2001, respectively.

2. Except as provided herein, the requirements contained in Air Quality Control Permit to Operate No. 9373-AA004 and Air Quality Control Construction Permit No. 9773-AC016 as amended through January 3, 1997 and June 27, 2001, respectively, remain in effect until superseded by an Operating Permit issued under AS 46.14.170.

3. Exhibit A in this permit, Source Inventory, is a revision to Exhibit A of Air Quality Control Permit to Operate No. 9373-AA004 Amendment 1 and Section IV.A of Air Quality Control Construction Permit No. 9773-AC016 Revision 1.

4. Exhibit B in this permit, Air Contaminant Emission Limits, Standards, Fuel Specifications, and Operating Limits, is a revision to Exhibit B of AQC Permit to Operate No. 9373-AA004 Amendment 1 and Sections VII and IX of Air Quality Control Construction Permit No. 9773-AC016 Revision 1.

5. Exhibit C in this permit, Process Monitoring Requirements, is a revision to Exhibit C of Air Quality Control Permit to Operate No. 9373-AA004 (issued May 11, 1993).

B. Record Keeping, Reporting, and Testing Conditions

6. The Permittee shall keep records of required monitoring data and support information for at least five years after the date of the collection; support information includes calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of reports required by this permit. The Permittee shall keep monitoring and compliance records as required by the Clean Air Act and applicable federal air quality regulations.

C. 18 AAC 50.055: Industrial Processes and Fuel-Burning Equipment

7. The Permittee shall comply with 18 AAC 50.055(a)(1) for visible emissions, 18 AAC 50.055(b)(1) for particulate matter emissions, and 18 AAC 50.055(c) for sulfur compound emissions as follows:

   7.1 Visible emissions, excluding condensed water vapor, from an industrial process or fuel-burning equipment may not reduce visibility through the exhaust effluent by any of the following:

      a. more than 20% for more than three minutes in any one hour[1], or

      b. more than 20% averaged over any six consecutive minutes[2].

[1] For purposes of this permit, the "more than three minutes in any one hour" criterion in this condition will no longer be effective when the Air Quality Control (18 AAC 50) regulation package effective 5/3/02 is adopted by the U.S. EPA.

[2] The six-minute average standard is enforceable only by the state until 18 AAC 50.055(a)(1), dated May 3, 2002, is approved by EPA into the SIP at which time this standard becomes federally enforceable.

7.2 Particulate matter emitted from an industrial process or fuel-burning equipment may not exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

7.3 Sulfur-compound emissions, expressed as sulfur dioxide, from an industrial process or from fuel-burning equipment may not exceed 500 ppm averaged over a period of three hours.

EXHIBIT A
Source Inventory

The table below provides a list of sources included in the AQC Permit to Operate No. 9373-AA004 and Construction Permit No. 9773-AC016, and the revisions made as they are carried forward to this new Construction Permit No 267CP01. The design rating and capacity as set out in this exhibit is only for the purpose of aiding in the field identification of the equipment.

Equipment Tag No.	Equipment New Tag No.	Rating in Permits 9373-AA004 & 9773-AC016	New Revised Rating	Explanation
Group I - Gas-Fired Turbines				
C2-2101-A C2-2101-B C2-2101-C G-201-A G-201-B G-201-C G-201-D G-3201-E G-3201-F P-2202-A P-2202-B P-CL07-A P-CL07-B	No change	15,140 hp ISO 15,140 hp ISO 15,140 hp ISO 4,900 hp ISO 4,900 hp ISO 4,900 hp ISO 4,900 hp ISO 4,900 hp ISO 4,900 hp ISO 5,400 hp ISO 5,400 hp ISO 5,400 hp ISO 5,400 hp ISO	No change	
G-3203	Added in 9773-AC016	38,932 kW ISO	53,500 hp (39,930 kW ISO)	G-3203 (GE Frame 6) was installed in 1999 permitted under 9773-AC016 rev.1, 6/27/01. Rating is revised based on new information from GE, per 8/30/02 permit application.
Group II - Gas-Fired Heaters				
H-201 G1-14-01 H-3204 H-102A E-CL06-A E-CL06-B	No change No change Added in 9773-AC016 Not included. Not included.	27.8 MMBtu/hr 40 MMBtu/hr 8 MMBtu/hr 3.5 MMBtu/Hr 15.1 MMBtu/hr 15.1 MMBtu/hr	No Change 44.4 MMBtu/hr 9.7 MMBtu/hr 4.375 MMBtu/hr	New information per 8/30/02 application. Correct maximum design rating. New information (12/23/02 CPAI comment) ECL06-A & B are no longer in service per 8/30/02 application.
Group III - Diesel Fired Equipment				
Not in previous permits.	G-701-A G-701-B P-CL04-ECC P-1A02 P-1E02 P-1F02 P-1G02 P-1L02 P-1Q02 P-1R02 P-1Y02	No values	1,086 hp 1,086 hp 215 hp 240 hp 240 hp 318 hp 318 hp 300 hp 300 hp 300 hp 300 hp	Not included in previous permit. Provided in the source list of 8/30/02 application.
Group IV - Flares				
Existing (All Flares) – Not identified in	H-101B H-KF01 H-KF02	1.6 MMscf/day	1.6 MMscf/day (pilot, purge, assist) combined	New information per 8/30/02 application.

Equipment Tag No.	Equipment New Tag No.	Rating in Permits 9373-AA004 & 9773-AC016	New Revised Rating	Explanation
previous permit.	H-CR01A H-CR01B		total for all flares.	
Group V - Incinerators				
H-250 H-347	No change No change	1,300 lb/hr 765 lb/hr	No change 900 lb/hr	New information per 8/30/02 application. Correct maximum design rating.
Group VI - Other Equipment (Drill Site Heaters)				
12 DS Heaters: 1A 1B 1C 1D (not in service) 1E 1F 1G 1H 1Q 1R 1Y 1L 1M	 H-1A01 H-1B01 H-2V01 H-3F01 H-1E01 H-1F01 H-1G01 H-1F-1901 H-1Q01 H-1R01 H-1Y01 Not included. Not included.	 200.3 MMBtu/hr 11.0 MMBtu/hr 11.0 MMBtu/hr 11.0 MMBtu/hr Not Listed 11.0 MMBtu/hr 10.0 MMBtu/hr 10.0 MMBtu/hr 11.0 MMBtu/hr 14.1 MMBtu/hr 11.5 MMBtu/hr 10.0 MMBtu/hr 9.7 MMBtu/hr 15.0 MMBtu/hr	 16.4 MMBtu/hr 16.4 MMBtu/hr 14.5 MMBtu/hr 19.6 MMBtu/hr 16.4 MMBtu/hr 14.9 MMBtu/hr 14.9 MMBtu/hr 16.4 MMBtu/hr 21.0 MMBtu/hr 17.2 MMBtu/hr 14.9 MMBtu/hr Not in service. Not in service.	New information per 8/30/02 application. Correct maximum design rating and specific equipment ID. There are no heaters in service at DS1L and DS1M per 8/30/02 application. Heater at DS1D is now in service per 8/30/02 application.
Group VII - Fixed Roof Storage Tanks (>10,000 gallon capacity)				
Not in previous permit.	T-201 T-175 T-176 T-177 T-178 T1-P101A T1-P101B G-19501 G-19502 G-19503 G-19504 X-CPF1-TEG T-1009 T-1H01	No Values	2,000 bbls 595 bbls 595 bbls 476 bbls 357 bbls 55,000 bbls 55,000 bbls 3,000 bbls 3,000 bbls 3,000 bbls 9,900 bbls 270 bbls 870 bbls 870 bbls	The storage tanks were not regulated under previous permit.

EXHIBIT B
Air Contaminant Emission Limits, Standards, Fuel Specifications, and Operating Limits

Permittee shall operate each source in compliance with the applicable emission standards specified by 18 AAC 50.040-060 (including Condition 7 of this permit), by an applicable federal New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants, by limits established as the result of a BACT or LAER determination, or the requested emission limits, standards, fuel specifications, and operating limits listed below, whichever is most stringent. All emission limitations are annual average, unless otherwise noted.

Note: In the tables below all turbine group emission limits for NOx refer to full load, ISO conditions. All other emission limits refer to full load, standard conditions.

Sources (Turbines): GE Frame 3 Turbines (C-2101-A, C-2101-B, and C-2101-C), EGT (Ruston) TB5000 Turbines (G-201-A, G-201-B, G-201-C, G-201-D, G-3201-E, and G-3201-F), and EGT (Ruston) TB5400 Turbines (P-2202-A, P-2202-B, P-CL07-A, and P-CL07-B)

Pollutant	Source(s)	Limits in AQCP to Operate No. 9373-AA004	Revised Limits	Explanation
NO_X	GE Frame 3	150 ppmvd @ 15% O_2 and 420.5 tpy for each unit	150 ppmvd @ 15% O_2	EPA PSD BACT and 10/7/97 permit revision
	EGT (Ruston) TB5000 Series	153 ppmvd @ 15 % O_2	153 ppmvd @15% O_2 for G-3201-E & F [150(14.4/Y); Y = 14.1 kJ/W-hr] No limit for G-201- (A through D); value is estimate only.	EPA PSD BACT and 10/7/97 permit revision. No limit for G-201-(A through D), because sources are pre-PSD.
	EGT (Ruston) TB5400 Series	115 ppmvd @ 15 % O_2 and 98.1 tpy for each unit	115 ppmvd @ 15 % O_2	EPA PSD BACT and 10/7/97 permit revision
	All units, except G-201-(A through D)		2,046 tpy total	EPA PSD BACT and 10/7/97 permit revision
SO_2	GE Frame 3	200 ppmv H_2S in fuel gas	For all units: 200 ppmv H_2S in fuel gas 109 tpy total combined, except G-201-(A through D)	Carried forward. EPA PSD BACT and 10/7/97 permit revision
	EGT (Ruston) TB5000 Series	200 ppmv H_2S in fuel gas		
	EGT (Ruston) TB5400 Series	200 ppmv H_2S in fuel gas		
CO	GE Frame 3	109 lb/MMscf and 70.7 tpy for each unit	For all units: 0.17 lb/MMBtu for each unit 612 tpy total combined for all units, except G-201- (A through D). No limit for G-201- (A through D); value is estimate only.	EPA PSD BACT and 10/7/97 permit revision and new information No limit for G-201-(A through D) because sources are pre-PSD.
	EGT (Ruston) TB5000 Series	109 lb/MMscf		
	EGT (Ruston) TB5400 Series	109 lb/MMscf and 23.4 tpy for each unit		

Pollutant	Source(s)	Limits in AQCP to Operate No. 9373-AA004	Revised Limits	Explanation
PM	GE Frame 3	14.0 lb/MMscf 9.1 tpy for each unit 0.05 grains/dscf (3-hr avg.)	For all units except G-201- (A through D): 50 tpy total combined No lb/MMscf limit for any units; value is estimate only. For each unit: 0.05 grains/dscf (3-hr avg.)	Tons per year limit established by EPA PSD BACT and 10/7/97 permit revision. EPA did not establish a lb/MMscf limit. No limit for G-201- (A through D) because sources are pre-PSD. PM standard set by 18 AAC 50.055(b)(1)
	EGT (Ruston) TB5000 Series	14.0 lb/MMscf 2.8 tpy for each unit 0.05 grains/dscf (3-hr avg.)		
	EGT (Ruston) TB5400 Series	14.0 lb/MMscf 2.8 tpy for each unit 0.05 grains/dscf (3-hr avg.)		
Opacity	GE Frame 3	For each unit: 20%, 3 min/hr	For each unit: 20%, 3 min/hr 20%, consecutive 6 min. average 10%, consecutive 6 minute average except G-201-(A through D)	20% limit set by 18 AAC 50.055(a)(1), 1/18/97 & 5/3/02. 10% limit set by EPA PSD BACT and 10/7/97 permit revision. Does not apply to pre-PSD sources, G-201- (A through D)
	EGT (Ruston) TB5000 Series			
	EGT (Ruston) TB5400 Series			
VOC	GE Frame 3	2.3 lb/MMscf and 1.5 tpy for each unit	For all units except G-201-(A through D): 7.5 tpy total No limit for G-201- (A through D); value is estimate only.	EPA PSD BACT and 10/7/97 permit revision. No limit for G-201- (A through D) because sources are pre-PSD.
	EGT (Ruston) TB5000 Series	0.2 lb/MMscf		
	EGT (Ruston) TB5400 Series	2.3 lb/MMscf and 0.5 tpy for each unit		

Source (Turbine): GE Frame 6 Turbine (G-3203),

Pollutant	Source(s)	Limits in AQC Construction Permit No. 9773-AA016	Revised Limits	Explanation
NO_X	G-3203	150 ppmvd @15% O_2 and 266 lbs/hr	No Change	Carried forward. ADEC BACT limit
SO_2	G-3203	200 ppmv H_2S in fuel gas (24-hr avg.)	No Change	Carried forward. ADEC BACT limit
Opacity	G-3203	20% opacity (3 minutes in any hour)	20% opacity (3 minutes in any hour) 20% opacity (consecutive 6-minute avg.)	Per 18 AAC 50.055(a)(1) revised 5/3/02
PM	G-3203	0.05 grains/dscf (3-hr avg.)	No Change	

Sources (Heaters): Broach Dual-fired Heater (H-201); Born Crude Heater (G1-14-01); and Drill Site Heaters (H-1A01, H-1B01, H-2V01, H-3F01, H-1E01, H-1F01, H-1G01, H-1F-1901, H-1Q01, H-1R01, H-1Y01)

Pollutant	Source(s)	Limits in AQCP to Operate No. 9373-AA004	Revised Limits	Explanation
NO_X	Broach Heater	140 lb/MMscf	No limit. Value is emission estimate only.	No limit for H-201; source is a pre-PSD.
	Born Heater	0.10 lb/MMBtu	For Born and drill site heaters: 0.10 lb/MMBtu each unit and 124 tpy (total combined)	EPA PSD BACT and 10/7/97 permit revision.
	Drill Site Heaters	0.10 lb/MMBtu		
SO_2	Broach Heater	200 ppmv H_2S in fuel gas	200 ppmv H_2S in fuel gas	Carried forward.
	Born Heater	168 ppmv H_2S in fuel gas and 4.5 tpy	162 ppmv H_2S in fuel gas (running 3-hr average)	The limit in 40 CFR 60.104(a)(1) converts to 162 ppmv @ 59ºF. Ton per year limit is now rolled into the group limit.
	Drill Site Heaters	200 ppmv H_2S in fuel gas	200 ppmv H_2S in fuel gas	Carried forward.
			33 tpy (total for all units except H-201)	EPA PSD BACT and 10/7/97 permit revision
CO	Broach Heater	35 lb/MMscf	No limit. Value is emission estimate only.	No limit for H-201; source is pre-PSD.
	Born Heater	0.018 lb/MMBtu	For Born and drill site heaters: 0.035 lb/MMBtu each unit and 44 tpy, (total combined)	EPA PSD BACT and 10/7/97 permit revision and new information
	Drill Site Heaters	0.018 lb/MMBtu		
Opacity	All Units: Broach, Born, and Drill Site Heaters	20%, 3 min/hr	20%, 3 min/hr 20%, consecutive 6 min. average	Opacity standard set by 18 AAC 50.055(a)(1), 1/18/97 & 5/3/02.
PM	Broach Heater	0.05 grains/dscf (3-hr. average) 6.2 lb/MMscf	For each source: 0.05 grains/dscf (3-hr avg.) 14 tpy (total for all units except H-201) No lb/MMscf limit for any units; value is estimate only	PM standard set by 18 AAC 50.055(b)(1) Tons per year limit established by EPA PSD BACT and 10/7/97 permit revision. EPA did not establish a lb/MMscf limit.
	Born Heater	0.05 grains/dscf (3-hr average) 6.2 lb/MMscf		
	Drill Site Heaters	0.05 grains/dscf (3-hr average) 6.2 lb/MMscf		
VOC	Broach Heater	2.8 lb/MMscf	No Limit	No BACT or other limits apply. EPA did not establish VOC limits for heaters.
	Born Heater	2.8 lb/MMscf	No Limit	
	Drill Site Heaters	2.8 lb/MMscf	No Limit	

Source (Heaters) : Kvaerner Fuel Gas Heater (H-3204) and ICE Air Heater (H-102A)

Pollutant	Source(s)	Limits in AQC Construction Permit No. 9773-AA016	Revised Limits	Explanation
NO_X	H-3204	0.1 lb/MMBtu	No Change	Carried forward. ADEC BACT limit
SO_2	H-3204	200 ppmv H_2S in fuel gas (24-hr avg.)	No Change	Carried forward. ADEC BACT limit
	H-102A	0.5% sulfur content in liquid fuel	No change	Carried forward.
Opacity	H-3204 and H-102A	20% opacity (3 minutes in any hour)	20% opacity (3 minutes in any hour) 20% opacity (consecutive 6-minutes avg.)	Per 18 AAC 50.055(a)(1) revised 5/3/02
PM	H-3204 and H-102A	0.05 grains/dscf (3-hr avg.)	No Change	Carried forward.

Sources : Incinerators (H-250 and H-347)

Pollutant	Source(s)	Limits in AQCP to Operate No. 9373-AA004	Revised Limits	Explanation
NO_X	H-250	No limit	No limit.	Source was installed before PSD permit program.
	H-347	No limit	8 tpy	EPA PSD BACT and 10/7/97 permit revision
SO_2	H-250	200 ppmv H_2S in fuel gas	No change.	Carried forward.
		0.5% sulfur content in liquid fuel	No limit.	The incinerator supplemental burners do not use liquid fuel.
	H-347	200 ppmv H_2S in fuel gas	200 ppmv H_2S in fuel gas and 4 tpy	EPA PSD BACT and 10/7/97 permit revision
		0.5% sulfur content in liquid fuel	No limit.	The incinerator supplemental burners do not use liquid fuel.
CO	H-250	No limit	No limit	Source was installed before PSD permit program.
	H-347	No limit	17 tpy	EPA PSD BACT and 10/7/97 permit revision
Opacity	H-250	For each unit: 20%, 3 min/hr	For each unit: 20%, 3 min/hr 20%, consecutive 6 min. avg.	Opacity standard set by 18 AAC 50.050(a), 1/18/97 & 5/3/02.
	H-347		For H-347: 10%, consecutive 6 min. avg.	EPA PSD BACT and 10/7/97 permit revision
PM	H-250	0.15 grain/dscf	0.15 grain/dscf @ 12% CO_2 (3-hr average)	PM standard set by 18 AAC 50.050(b). Carried forward.

Pollutant	Source(s)	Limits in AQCP to Operate No. 9373-AA004	Revised Limits	Explanation
	H-347	0.1 grain/dscf	0.10 grain/dscf @ 12% CO_2 and 12 tpy	EPA PSD BACT and 10/7/97 permit revision
VOC	H-250	No limit	No limit	Source was installed before PSD permit program.
	H-347	No limit	5.3 tpy	EPA PSD BACT and 10/7/97 permit revision adjusted from 0.5 to 5.3 tpy to account for the typographical error found in the EPA PSD permit.

Source (Flares): McGill Emergency Flares (H-101B, H-CR01A and H-CR01B) and Kaldair Smokeless Emergency Flares (H-KF01 and H-KF02)

Pollutant	Limits in AQCP to Operate No. 9373-AA004	Revised Limit	Explanation
NO_X	No limit	No limit.	No BACT limits apply.
SO_2	200 ppm H_2S in fuel gas	No change	Carried forward.
CO	No limit	No limit.	No BACT limits apply.
Opacity	20%, 3 min/hr	20%, 3 min/hr 20%, consecutive 6 min. avg. For smokeless flares (H-KF01 and H-KF02): No visible emissions (except for periods not to exceed 5 minutes in any two hours).	18 AAC 50.050(a), 1/18/97 & 5/3/02. 40 CFR 60.18(c)(1), Subpart A – General Control Device Requirements.
PM	0.05 grains/dscf (3-hr avg.)	No change	Carried forward. PM standard set by 18 AAC 50.055(b)(1)
VOC	No limit	No limit.	No BACT limits apply.

EXHIBIT C
Process Monitoring Requirements

Permittee shall install, calibrate, operate, and maintain in good working order air contaminant emissions and process monitoring equipment on the sources described below.

MONITORING AND REPORTING REQUIREMENTS

Gas Turbines and Heaters Groups I & II	A fuel gas meter, which indicates the volume of natural gas consumed in each group, must be installed or other means of estimating fuel consumption must be provided.
Fuel Gas	Determine the sulfur (H_2S) content of the natural gas burned as fuel once each month. Acceptable methods are ASTM D-4810-88, ASTM 4913-89, Gas Producers Assn. (GPA) method 2377-86 or an alternative analytical method approved by the Department. A reading from the KUTP continuous monitoring system, which monitors CPF-1 plant fuel gas, is also acceptable for reporting the H_2S content of the fuel gas.
KUTP Crude Heater G1-14-01	Permittee shall install, maintain, and operate in good working order a CEMS for recording and monitoring hydrogen sulfide content of the fuel burned in the KUTP crude heater which contains a component of the process gas generated within KUTP. This system shall be installed and calibrated according to 40 CFR Part 60, Appendix B, Performance Specification 7.